

[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [66 FR 11103 2/22/2001]

[Docket No. 2000-NM-256-AD; Amendment 39-12121; AD 2001-04-03]

RIN 2120-AA64

Airworthiness Directives; Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model EMB-145 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain EMBRAER Model EMB-145 series airplanes, that requires inspection of the bolts on the hinge fittings that attach the spring tab and the servo tab to the rear spar of the elevators for evidence of loosening; inspection of the region of the hinge fittings on the spring tab for interference of the bonding jumpers attached to the hinge fittings with the leading edge of the spring tab; and corrective action, if necessary. This amendment is prompted by issuance of mandatory continuing airworthiness information by a foreign airworthiness authority. The actions specified by this AD are intended to prevent the spring tab or the servo tab from becoming disconnected, resulting in structural failure. The action is also intended to prevent damage to the leading edge of the spring tab, which could result in loss of control of the elevator.

DATES: Effective March 29, 2001.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of March 29, 2001.

ADDRESSES: The service information referenced in this AD may be obtained from Empresa Brasileira de Aeronautica S.A. (EMBRAER), P.O. Box 343 - CEP 12.225, Sao Jose dos Campos - SP, Brazil. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Viswa Padmanabhan, Aerospace Engineer, ACE-117A, FAA, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia 30349; telephone (770) 703-6049; fax (770) 703-6097.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to certain EMBRAER Model EMB-145 series airplanes was published in the **Federal Register** on December 8, 2000 (65 FR 76950). That action proposed to require inspection of the bolts on the hinge fittings that attach the spring tab and the servo tab to the rear spar of the elevators for evidence of loosening; inspection of the region of the hinge fittings on the spring tab for interference of the bonding jumpers attached to the hinge fittings with the leading edge of the spring tab; and corrective action, if necessary.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were submitted in response to the proposal or the FAA's determination of the cost to the public.

Conclusion

The FAA has determined that air safety and the public interest require the adoption of the rule as proposed.

Cost Impact

The FAA estimates that 71 airplanes of U.S. registry will be affected by this AD. The initial inspection will take 2 work hours per airplane at an average labor rate of \$60 per hour. Based on these figures, the cost impact on U.S. operators of the initial inspection (Part I) specified in the AD is estimated to be \$8,520, or \$120 per airplane.

The cost impact on U.S. operators of follow-on actions is specified in the following table:

Action	Cost of follow-on actions			
	Work Hours	Cost of labor/airplane	Cost of parts/airplane	Cost/airplane
Corrective action/ Part II	6	\$360	\$71	\$431
Corrective action/ Part III	6	\$360	\$2	\$362
Repetitive inspection/ Part IV	3	\$180	\$0	\$180

The cost impact figures discussed above are based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

Regulatory Impact

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption "ADDRESSES."

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "av-info.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2001-04-03 EMPRESA BRASILEIRA DE AERONAUTICA S.A. (EMBRAER): Amendment 39-12121. Docket 2000-NM-256-AD.

Applicability: Model EMB-145 series airplanes; serial numbers 145004 through 145103 inclusive, 145105 through 145111 inclusive, and 145113 through 145117 inclusive; certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent the spring tab or the servo tab from becoming disconnected, resulting in structural failure, and to prevent damage to the leading edge of the spring tab, which could result in loss of control of the elevator, accomplish the following:

Inspection

(a) Within 200 flight hours after the effective date of this AD, conduct a detailed visual inspection, as specified in paragraph (a)(1) or (a)(2) of this AD, as applicable, in accordance with the Accomplishment Instructions of EMBRAER Service Bulletin 145-55-0009, Change No. 02, dated May 19, 2000.

(1) For airplanes having serial numbers 145004 through 145055 that have not been modified in accordance with EMBRAER Service Bulletin 145-55-0009, dated April 7, 1998: Inspect the bolts attaching the spring tab and servo tab hinge fittings to the rear spar of the left-hand and right-hand elevators for evidence of loosening.

(2) For airplanes having serial numbers 145004 through 145103, 145105 through 145111, and 145113 through 145117: Inspect the region of the hinge fittings on the spring tab for interference of the bonding jumper on the attaching bolts with the leading edge of the spring tab.

NOTE 2: For the purposes of this AD, a detailed visual inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

Modification

(b) Perform follow-on corrective actions, as applicable, in accordance with EMBRAER Service Bulletin 145-55-0009, Change No. 02, dated May 19, 2000, as shown in the following table:

Table 1: Follow-on Corrective Actions

If...	And...	And...	Then...
(1) No discrepancy is found,	[Reserved]	[Reserved]	Prior to further flight, seal the bolt heads and adjacent hinge fitting surfaces.
(2) Any loose bolt or any interference of the bonding jumpers with the leading edge of the spring tab is found,	(i) The airplanes have serial numbers 145004 through 145055, inclusive	The airplanes have not been modified in accordance with EMBRAER Service Bulletin 145-55-0009, dated April 7, 1998	Prior to further flight, accomplish Part II of the service bulletin, including replacing bolts, adding washers, and changing the position of the lockwire and the bonding jumpers.
	(ii) The airplanes have serial numbers 145004 through 145055, inclusive, and 145056 through 145076, inclusive	The airplanes have been modified in accordance with EMBRAER Service Bulletin 145-55-0009, dated April 7, 1998	Prior to further flight, accomplish Part III of the service bulletin, including adding washers and changing the position of the lockwire and the bonding jumpers.
	(iii) The airplanes have serial numbers 145077 through 145103, inclusive; 145105 through 145111, inclusive; and 145113 through 145117, inclusive	[Reserved]	Prior to further flight, accomplish Part IV of the service bulletin, including adding washers and changing the position of the lockwire and the bonding jumpers.

Repetitive Inspections

(c) Repeat the detailed visual inspection specified in paragraph (a) of this AD, at intervals not to exceed 400 flight hours.

Terminating Action

(d) Within 2,000 flight hours from the effective date of this AD, accomplish Part II, III, or IV, as applicable, of the service bulletin.

Alternative Methods of Compliance

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Atlanta Aircraft Certification Office (ACO), FAA. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Atlanta ACO.

NOTE 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Atlanta ACO.

Special Flight Permits

(f) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(g) The actions shall be done in accordance with EMBRAER Service Bulletin 145-55-0009, Change No. 02, dated May 19, 2000. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Empresa Brasileira de Aeronautica S.A. (EMBRAER), P.O. Box 343 - CEP 12.225, Sao Jose dos Campos - SP, Brazil. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

NOTE 4: A portion of the subject of this AD is addressed in Brazilian airworthiness directive No. 98-05-02, dated May 28, 1998.

Effective Date

(h) This amendment becomes effective on March 29, 2001.

FOR FURTHER INFORMATION CONTACT: Viswa Padmanabhan, Aerospace Engineer, ACE-117A, FAA, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia 30349; telephone (770) 703-6049; fax (770) 703-6097.

Issued in Renton, Washington, on February 9, 2001.

Vi L. Lipski, Manager, Transport Airplane Directorate, Aircraft Certification Service.